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ABSTRACT

This paper looks at the behaviorist phenomenon of microteaching through a neo-Vygotskian theoretical lens, employing a case study of two groups of prospective teachers being coached by a professor or clinical instructor. The paper attempts to broaden Vygotsky's notion of the zone of proximal development (ZPD) by conceptualizing the ZPD as a special kind of strategic relationship. This view of microteaching examines how social, cultural, and historical conditions constitute the processes by which prospective teachers learn to teach. It examines how the concept of the ZPD has been portrayed as a "construction zone," a created, shared space in which meaning is constructed. The paper attempts to show how the ZPD is co-constructed by the persons who form the teaching-learning relationship and how the "construction zone" continually comes into being as meanings and tasks are negotiated and renegotiated within the historical context of a strategic relationship. It analyzes manifestations of power and knowledge, and places power/knowledge connections within the broader historical context of the teacher preparation program. The paper then analyzes microteaching as autonomous school learning and as connected labor. (Contains 29 references.) (JDD)

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CO-CONSTRUCTING THE ZONE: A NEO-VYGOTSKIAN VIEW OF MICROTEACHING

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by

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Introduction

This paper looks at the behaviorist phenomenon of microteaching through a neo-Vygotskian theoretical lens. Microteaching emerged in the 1960's when teacher educators imported "competency-based" education from behavioral psychology which had applied the concept to training in military and industrial settings (Gage & Winne, 1975). Historically, the principles of microteaching derive from a mechanistic cybernetic model which assumes that events can be analyzed into discrete parts and that feedback can change behavior through a linear causal system. Essential features of microteaching as competency-based training include: analysis of teaching behavior into discrete components or a repertoire of skills; instruction in particular competencies; practice performing them in risk-constrained environments, e.g., through shortened lesson length; and the receipt of corrective feedback which is then incorporated into a new cycle of performance and corrective feedback.

A neo-Vygotskian view of microteaching focuses on analysis of a different sort by asking this essential question: how do social, cultural, and historical conditions constitute the processes by which prospective teachers learn to teach? Beginning their work during the 1920's and 1930's, the Russian theoretician Vygotsky and his colleagues Luria and Leontiev were the first to formulate psychological explanations for the links between culture and cognition (e.g., Vygotsky, 1978; 1987). In the Vygotskian cultural-historical theory, humans' higher psychological processes are socioculturally based because they derive from interaction with cultural products and other beings in social settings (Van der Veer & Valsiner, 1991). In a microteaching laboratory, for example, a Vygotskian analysis of the derivation of psychological processes would specify the nature of the interactions among: (1) the historical factors that influenced the development of the

microteaching laboratory; (2) the cultural products used and produced by prospective teachers and their instructors in the laboratory (such as lesson plan formats and videotapes of microteaching); and (3) the ways in which prospective teachers learn certain culturally valued behaviors through social interaction with instructors and microteaching peers.

One of Vygotsky's original concepts, that of the zone of proximal development (or ZPD), provides a tool for the microanalysis of prospective teachers' development at the intersection of persons and their social worlds (Valsiner & Van der Veer, 1992). Vygotsky speculated that the process of teaching-learning creates a ZPD, which is "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (1978, p. 86). Thus, the ZPD is co-constructed by the persons who form the teaching-learning relationship. It is a means by which more experienced persons and less experienced persons jointly negotiate task accomplishment.

Since Vygotsky introduced the metaphoric concept of the zone in the 1930's, many scholars have investigated, critiqued, and refined its meaning. Some critics focus on the methodological paradox inherent in attempts to study directly the budding processes of development as they emerge in the present since they can be detected only after they have developed (e.g., Valsiner & Van der Veer, 1992). Other researchers focus on refining linear interpretations of the ZPD, conceiving of developmental "paths through the zone" which comprise four distinct stages progressing from "assisted performance" to totally independent performance of a task (Tharp & Gallimore, 1988). Still other scholars have recently described the ZPD as a "construction zone," a concept which portrays the zone as a created, shared space in which meaning is constructed (Newman, Griffin, & Cole, 1989). Newman, Griffin, and Cole's (1989) interpretation of the zone is a holistic one

which recognizes the "social construction of cognitive tasks." This paper attempts to show how the "construction zone" continually comes into being as meanings and tasks are negotiated and renegotiated within the historical context of a strategic relationship.

The Neo-Vygotskian View--The Zone as a Strategic Relationship

Recent theoretical advances show that the zone is constructed through a dynamic relationship whose nature changes as persons negotiate the performance of selected tasks using specific cultural artifacts. Thus, the ZPD is the crucible in which "culture and cognition create each other" (Cole, 1985); it is the "construction zone" in which persons negotiate both the meaning of tasks and the conditions of task accomplishment (Newman et al., 1989). What makes the conceptual lens through which this paper looks at microteaching a neo-Vygotskian one is the addition of a Foucauldian analytic interpretation of the power/knowledge relations inherent in the co-construction or negotiation of the zone. The neo-Vygotskian view shows how power and knowledge both constitute and emerge from the crucible of the negotiated ZPD.

A Foucauldian analysis of power/knowledge relations in the process of power/knowledge construction adds another dimension to the ZPD as an explanatory concept. The neo-Vygotskian view goes beyond conceptions of the zone as a metaphorical space in which persons negotiate and construct meaning by conceptualizing the zone as a strategic relationship located in sociocultural space and historical time. This paper conceives strategy as the way in which culturally based, tacitly and explicitly known power/knowledge relations constitute the negotiation process and, correlatively, help to constitute the resultant power/knowledge connections that participants construct.

According to the French philosopher Michel Foucault (1983), power manifests itself in a relationship by the ways in which actions modify the actions or potential actions of others. Power is by definition enacted in a web of unequal relationships; moreover, "it is multidirectional, operating from the top down and also from the bottom up" (Dreyfus & Rabinow, 1983, p. 185). In Foucault's (1983) explanation, knowledge is defined as what counts as "truth." Dreyfus and Rabinow (1983) describe Foucault's perspective as "interpretive analytics, " one which diagnoses "the history and organization of current cultural practices" by describing the power/knowledge relations in a "grid of intelligibility." An essential element of Foucault's analytic interpretive grid is the insight that "power and knowledge are not identical to each other;" their relationship is correlative, not causal, and must be explained by its history (Dreyfus & Rabinow, 1983, p. 203). In other words, power and knowledge "operate in history in a mutually generative fashion" (p. 114). Analysis of the processes of power/knowledge relations must specify the ways in which power and knowledge help to constitute each other within a specific cultural and historical setting. In analysis of the power/knowledge relations in a microteaching laboratory, for example, one asks: what is the logic to microteaching practices--toward which strategic objectives, from which historical paths, and with what overall effects (Dreyfus & Rabinow, 1983)?

Congruent with the Vygotskian cultural-historical perspective, a Foucauldian analysis of power/knowledge relations as persons negotiate the zone requires description of their genesis in the broader traditions, norms, status systems, and customs of various social orientations within the larger culture. Within a specific network of social relations, such as a microteaching laboratory, power/knowledge relations manifest themselves in a number of ways: power and knowledge help to constitute, for example, "what will be accepted as real and having authority, what strategies and status system will be used for relating to

others, and how to identify and resolve the problematic" (Bowers & Flinders, 1990, p. 161). Analysis must link these manifestations of power and knowledge to norms, status systems, and customs within the larger culture. This analysis attempts to do that by placing the power/knowledge connections in the laboratory within the broader historical context of the teacher preparation program itself.

The Teacher Preparation Program in Historical Context

This investigation took place in the early 1990's on the campus of a major research university in a southeastern state of the United States of America. Two themes characterized the state's efforts to strengthen public education and teacher preparation in the decade prior to the study. First, the state's legislature supported efforts to prepare teachers through collaborative public school-college partnerships by endorsing policies and appropriating funds for innovative teacher preparation programs. Second, the legislature promoted the use of normative standards from the body of research on effective teaching by requiring teacher evaluations using behavioral guidelines based on this research.

Both themes of collaboration and effective teaching ran throughout the teacher preparation program on which this investigation focused. This study describes aspects of culture and cognition in a microteaching laboratory course, which comprised one semester of a two-year model teacher education program funded by special legislative appropriations for collaborative public school-college partnerships in teacher preparation. The program built upon the partnership theme by hiring each year a different public school teacher who was released from public school classroom duties to work full-time at the university as a clinical instructor in the teacher preparation program.

In addition to the partnership theme, the teacher effectiveness theme dominated the cultural knowledge about teaching represented in the explicit curriculum of the teacher preparation program. Instructors taught a "six step" lesson planning format (derived from the effective teaching research) to prospective teachers in the fall semester of their junior year and expected prospective teachers to use only this format when teaching lessons in the laboratory course. Moreover, instructors used a list of 37 teaching behaviors, which were decontextualized or taken out of the classroom context and listed on an observation instrument, to judge microteaching performances in the laboratory course. These teaching behaviors derived from two sources: (1) positivistic studies of teaching behaviors which correlated with increased student achievement (i.e., the effective teaching research literature as a knowledge base) and (2) the craft wisdom of practicing master teachers who served as consultants to the teacher preparation program.

Investigating Lived Experience in the Microteaching Laboratory

The investigator observed as a nonparticipant during 26 three-hour-long sessions of a microteaching laboratory course. Prospective teachers planned, taught, and retaught three short (15-20 minute) lessons to their microteaching peers using the six step lesson format. Since instructors divided the group of 25 prospective teachers into two groups, two sessions of microteaching occurred simultaneously in adjacent simulated classrooms on the university campus. The five instructors divided themselves into two groups of two and three each to coach prospective teachers, and the researcher observed microteaching in each of the two groups, a division which prospective teachers referred to as "two sides."

The researcher used a semi-structured format to interview selected participants about their microteaching experiences. All five instructors, one white male and four white females, volunteered for interviews. The researcher also selected four white female prospective teachers from a group of 16 volunteers to interview after they had taught and retaught each lesson. In addition, the investigator obtained copies of selected cultural artifacts for review: (1) instructors' notes about microteaching episodes; (2) videotapes of prospective teachers' microlessons; (3) lesson plans and reflective papers written by prospective teachers during the course; (4) course syllabi describing the microteaching course, the preceding course, and the next courses in the Teacher Preparation Program; (5) a copy of a notebook kept by a prospective teacher during the preceding course; and (6) copies of published articles and papers written about the Teacher Preparation Program.

To begin analysis, the investigator generated explanatory categories, analogies, and metaphors using participants' interview responses (Bogdan & Biklen, 1982). Further investigative activities provided opportunities to develop a "conversational relation" through the nonparticipant observation of participants' own categories and subsequent collaborative reflection with participants in additional interview sessions (Van Manen, 1990). Explanations for relationships among participants' categories emerged inductively through the method of "constant comparative analysis" (Glaser & Strauss, 1967). After a review of theoretical literature related to emerging categories and hypotheses, the investigator revised the initial research questions and organized a written, interpretive draft according to themes represented in revised research questions. After participants responded to the interpretive draft, their comments were incorporated into a revised interpretation. This paper reports conclusions from the

original interpretation (Vare, 1992a) and further develops the theme of the ZPD as a negotiated relationship.

Instructors as Negotiators--Power/Knowledge Contrasts

This paper uses contrasts in participants' cultural knowledge about teaching and differential exercise of power relations to show how instructors and prospective teachers negotiated the conditions for two distinctly different zones of proximal development, or strategic relationships, in a microteaching laboratory. Newman, Griffin, and Cole, in their recent portrayal of the ZPD as "the construction zone," redefine the concept of a "task" as a "strategic fiction" (1989). This paper conceives the "zone" as a "strategic relationship" in which more and less experienced persons negotiate the conditions of task performance. Thus, the "task" becomes an activity defined by the power/knowledge relations exercised by all participants involved. Since microteaching occurred in two group settings of 2-3 instructors and 11-14 microteaching peers, the process is characterized in this paper as a group "apprenticeship in thinking" (Rogoff, 1990) and the focus is upon microanalysis of the laboratory setting as a sort of "metazone," or initially risk-constrained environment.

A serendipitous event allowed two contrasting apprenticeships in thinking to emerge within the "cultural borderland" of the microteaching laboratory course (Rosaldo, 1989). Instructors divided themselves to coach two groups of prospective teachers in the following manner: (1) Communication Skills/Social Studies (CS/SS) majors coached by a tenured, full professor, a clinical (nontenure track) assistant professor, and a graduate teaching assistant; and (2) Mathematics/Science (M/S) majors coached by the clinical instructor (a practicing teacher) and a visiting instructor. Both the clinical instructor, "Marianne," and the visiting instructor,

"Sarah," had extensive experience teaching primarily mathematics in public schools, Marianne for 10 years and Sarah for 20.

The investigator used a framework derived from Leontiev's activity theory to analyze instructors' different "interpretations of context" by contrasting their differential goals, motives, and conditions of performance in the microteaching laboratory (see, for example, Wertsch, 1985). Analysis showed that, in the actions by which they guided prospective teachers' microteaching, instructors demonstrated two different interpretations of context--microteaching as an instance of autonomous school learning and microteaching as an example of connected labor (Vare, 1992b). This paper further analyzes the strategic construction of the ZPD in each microteaching context by portraying the different power/knowledge relations constructed by both instructors and prospective teachers in the negotiation process.

Microteaching as Autonomous School Learning

Instructors on the CS/SS "side" of the microteaching laboratory practiced an implicit philosophy of microteaching as "autonomous school learning" characterized by the development of independence through separate learning and the use of teaching errors as opportunities to identify areas for improvement so that each teaching performance represented a successive approximation to an ultimate standard (Vare, 1992b) On this side instructors' activities implicitly defined "teaching" as prospective teachers' own learning of selected teaching behaviors. In their exercise of power these instructors promoted separate and independent learning by requiring the unsupported teaching of lessons in the laboratory and by privileging knowledge about teaching through privately given written and oral critiques. Moreover, instructors used primarily the knowledge about teaching from

the applied science, or effective teaching, research base to critique prospective teachers' microteaching. Prospective teachers viewed microteaching conditions on the CS/SS side as stringent but artificial. They exercised power by not asking each other questions during lessons that might hurt their fellow prospective teachers in the grading process. The knowledge that they constructed helped them to reach the instructors' goal of demonstrating selected effective teaching behaviors while performing all aspects of the six step lesson plan format within a specific time frame of 15-20 minutes.

Power as a "hidden agenda" of "detached observation:" CS/SS instructors functioned as applied scientists who distanced themselves emotionally and physically from prospective teachers. These instructors referred to themselves as "detached observers," an attitude which they implemented by consistently watching the microteaching lessons with what prospective teachers called "poker faces." Moreover, detached observers did not interact verbally with prospective teachers as they taught lessons. After four class sessions, the professor and the clinical assistant professor further detached themselves by moving outside the laboratory and observing the remainder of the lessons through a one-way observation window inside a booth which housed the equipment used to video-tape that side's microteaching lessons. Only the graduate teaching assistant remained inside, sitting silently in the laboratory classroom as prospective teachers taught. "Glenda," the clinical assistant professor on the CS/SS side, had participated in microteaching as both a "detached observer" and as an instructor who "actively embraced the role of a student." Glenda preferred detached observation because she felt that "when instructors play the role of students, they ask questions that serve the end of evaluating." She explained that "when instructors act as students,

they can't deny that they have a hidden agenda." Further analysis shows that the style of "detached observation" possessed its own "hidden agenda" as well.

"Detached observers" encouraged prospective teachers' separate and independent learning by requiring unsupported, solo teaching performances. Beginning with the first lesson, prospective teachers had to teach microlessons without receiving any cues or prompts from instructors during lessons. In addition, these instructors encouraged only privately given feedback from both instructors and peers after microteaching lessons. Prospective teachers provided peer critiques by writing private comments after each lesson, and instructors provided only private oral feedback, failing to initiate oral feedback from either prospective teachers or instructors after the fourth day of microteaching in the laboratory. "Detached observers" provided their oral and written instructional feedback in formally scheduled and privately held post-conferences. In these ways, the behavior of CS/SS instructors more closely resembled the formally structured evaluation cycles of pre-conference, observation, and post-conference that prospective teachers would encounter when they began teaching in actual classrooms.

Knowledge as "applying the big standards of the knowledge-base research:" Knowledge, or "truth," on the side of detached observation possessed normalizing and sacred (or separate) qualities. "Truth" came primarily from the research base on effective teaching and was discussed after microteaching in the privacy of written comments from peers or behind the closed doors of privately held conferences with instructors. When detached observers gave prospective teachers suggestions and critiques in conferences before and after microteaching lessons, they were likely to focus only on the 37 items listed on the observation checklist, behaviors derived from the research on effective teaching and from the craft

knowledge of practicing teachers who helped to design the Teacher Preparation Program. "Kacy," a M/S major, noticed that detached observers expected "to see the norms and standards that he ('Anderson,' the tenured, full professor) professed to us at the beginning of the microteaching course." Anderson knew this body of research so well that Marianne, the clinical instructor, referred to him as "Mr. Effective Teaching." Kacy called these norms and standards the "big picture" or "applying the big standards, the knowledge-base research that supports what will work in a classroom." "Kent," a CS/SS major, found evaluation by detached observers "intimidating as hell" but "consistent." "The ways they look at teaching are defined by the evaluation instrument," he said. "You know the rules of the game."

The power/knowledge connection--learning to "make it through your six steps" and "do it on your own:" Prospective teachers on the side of detached observation experienced autonomous school learning as "more harsh" than what they experienced on the other side of the microteaching laboratory. Since prospective teachers on both sides taught initial lessons to their same-subject peers and switched sides so that prospective teachers taught different-subject peers for reteaching, they often made comparisons between the two groups. "Alyssa," a prospective CS/SS teacher, commented: "We're not being babied. Nothing is being given to us. They're so much harder on us than they are on the other side." Alyssa commented further that the CS/SS majors were "getting the better end of the deal." She explained that the detached observers had high standards but that was good because "you'll just be ready to do it on your own."

Alyssa also realized that what CS/SS majors were learning was how to perform "a mini lesson--introduction, conclusion, and, you know, to end in our 15 minutes." She explained that the CS/SS majors felt pressured to perform "a whole

lesson set within that time." "We had so much structure," she said. "You know, we had to have everything wound up. Like, 'here's your homework and have a nice day,' 'ding,' and the bell would ring, you know. We had to have it down to what we were gonna say to the very last minute of the bell ringin' as though that were a school bell ringing." Kacy, a M/S major, realized this also. "Over on the other side," she said, "it seems more like, um, you got through your six steps. What's-her-name (Madeline Hunter) would have been proud."

Microteaching as Connected Labor

Instructors on the M/S "side" of the laboratory practiced in their activities an implicit philosophy of microteaching as "connected labor" (Vare, 1992b). Although writers such as Arendt (1958) distinguish between the concepts of "work" and "labor," this analysis prefers the term "labor" because it emphasizes metaphorically one aspect of the teacher's role--that of a "midwife" who practices a philosophy of "connected teaching" to support students' construction of their own learning (Belenky, Clinchy, Goldberger, & Tarule, 1986). On the M/S side of connected labor, instructors' activities implicitly defined "teaching" as prospective teachers' behaviors which resulted in their microteaching peers' own learning during the laboratory lessons. In their exercise of power, M/S instructors promoted connected, experiential learning by building attached relationships and constructing shared knowledge through public, oral critiques. In sharp contrast to the style of detached observation, M/S instructors made frequent use of their practical wisdom acquired through extensive teaching experience in actual public school classrooms. Prospective teachers viewed microteaching conditions on the side of connected labor as personalized but strenuous. Prospective teachers exercised power during microteaching lessons by asking questions to aid their

microteaching peers in teaching their lessons. The knowledge that prospective teachers constructed helped them to reach the instructors' goal of using mechanical "skills" to teach content during the microteaching lessons.

The connecting power of "family" and personalized scaffolding: M/S instructors, Sarah and Marianne, created an atmosphere of family and parental connection in their relationships with students. Both instructors voiced the view that a critical element of their philosophy of teaching depended upon establishing "connected" relationships with their students (Belenky et al., 1986). Sarah explained the importance of bonding: "Marianne has already bonded with the students (by teaching them the previous fall semester). I do that with my secondary math students as well. We are a family." Marianne described herself as a "little mama" who was "just so proud" of her students' accomplishments. She recognized that her relationship with her students was an important part of her job, no matter what the context. She explained: "In any kind of teaching you need to remember that the students are why you teach. If there's anything that I've learned this year as a clinical instructor, that's it. I like the student part of my job." Prospective teachers felt the elements of connection and often described the M/S instructors' relationship with their students in parent-sibling terms. "Carol," a CS/SS major, noticed that "it's like the students are siblings she's (Marianne) helping to raise." "Erica," a M/S major, commented that "Marianne's become like our Mom. We go, you know, 'Marianne, I'm hungry. I'm tired. Talk to me.' And she'll sit there and talk to us and make us feel better and say, 'Stop whining' and go on."

In what was more than just description of its importance, though, the M/S instructors arranged conditions in the microteaching laboratory so that shared experiences enabled the creation of "bonds" and an atmosphere of "family."

Belenky et al. (1986) describe these crucial aspects of "connected" relationships: the capacity for empathy; attachment through caring; shared experiences; a focus on understanding the other in that person's own terms; and a truth "that is personal, particular, and grounded in firsthand experience" (p. 113). Marianne, for example, indicated that she possessed an empathetic understanding of the prospective teachers' emotional sensitivity during microteaching. During her undergraduate teacher preparation program, Marianne had taught one microteaching lesson, and she described it as "an experience that kind of makes you feel like you are stripped or something. I mean, up there naked in front of the class." Once Marianne talked in an interview session about "Mark," who called her late one evening and felt so depressed about his microteaching grades that he was considering dropping out of the teacher preparation program. Marianne sympathized with his feelings because, as she said, "I thought back to the one peer lesson that I did in methods class. I can see the comments sheet in my mind's eye right now. It was like the most devastating experience I think I had in college."

Perhaps because of her empathetic connection to prospective teachers' emotional vulnerability as they learned to teach, Marianne practiced a type of "scaffolding" during microteaching lessons (see, for example, Greenfield, 1984). Because Sarah occasionally taught another class during the time that the microteaching class met, she often prepared her critiques by watching prospective teachers' videotapes. As the M/S instructor who always remained in the microteaching classroom, Marianne sometimes gave prospective teachers support in the form of cues and prompts while they were teaching lessons. At times she would cue certain prospective teachers to ask higher level questions before their lessons ended. She also frequently gave time cues in the form of warnings that three or five minutes were left in the lesson. This support prompted Kent, a CS/SS major, to comment that "On Dr. Anderson's side it feels as though the evaluation is

stricter" and Alyssa, also a CS/SS major, to notice that the M/S majors were being "babied."

In addition to her provision of support in the form of prompts and cues during microteaching, Marianne always encouraged public, oral feedback after prospective teachers taught microteaching lessons. An important element of the public, oral feedback included Marianne's ability to recognize personal qualities of prospective teachers and to relate those qualities to aspects of microteaching and potential classroom situations. Rather than remaining detached during lessons, Marianne often made personalized comments about prospective teachers when she wanted to comment on aspects of the immediate experience itself. In her comments to Mark about his initial manipulatives lesson, for example, Marianne told him that his lesson was better this time because "you were more relaxed, not trying to be Mr. Mechanical, Mr. Perfection." When Kacy finished the reteach of her didactic lesson, Marianne told the CS/SS majors, who were Kacy's "students," about Kacy's original lesson plan in which Kacy was going to play "Simon Says" with a seventh grade class. When she had to script possible responses from the students in her hypothetical class, Kacy wrote: "Who knows what they will think of?" Marianne commented to the CS/SS majors present, "She's absolutely right." Then she added, "Kacy will be perfect for teaching children. Her use of humor is perfect." Marianne also used opportunities during subsequent microteaching lessons to coach Kacy about how she might use her sense of humor appropriately in an actual middle school classroom.

Knowledge as "side notes" from "having lived these lessons:" Knowledge, or "truth," on the side of parental connection came in the form of instructors' practical wisdom gained from extensive experience teaching in actual public school classrooms. Moreover, truth became noticeably distinguished by its public nature.

Although Marianne and Sarah did address teaching behaviors listed on the observation instrument, their critiques often included more suggestions about how to teach the particular content area, whether mathematics or science. During microteaching lessons themselves, Marianne frequently shared the wisdom of her practice that came from her "having lived these lessons" by using opportunities to comment about applications of the immediate situation to teaching in actual classrooms. In "Wesley's" reteach of his didactic lesson, for example, she pointed out that "kids need to have calculators on their desks to do the problems that involve decimals, such as squaring 2.5." During "Erica's" initial manipulatives lesson, Marianne commented that Erica should give students a copy of the angles that she used on an overhead as a model; Marianne told Erica in a public critique that "your students (in the lab) were looking for them." Marianne then pointed to one of the examples of the angles at the bottom of the worksheet that Erica gave to her lab "students" and said, "Real students will flip out on the overlapping one, trying to measure it. Maybe you should put only two instead of three together." When Erica commented that she found the example in question in a teacher's book, Marianne then warned the M/S majors to "watch out for teachers' books, especially in geometry." Kacy commented on the public nature of Marianne's expertise, noting that the M/S majors "get a lot of side notes, and it's really helpful."

<u>The power/knowledge connection--using "out loud feedback" to "teach the student too:"</u> Power/knowledge connections on the M/S side of parental connection manifested themselves most noticeably in the oral critiques of "out loud feedback." The most important aspect of this phenomenon was that it actually occurred. Knowledge by virtue of oral critiques became distinguished by its public access. As the M/S instructor who remained in the laboratory with prospective teachers, Marianne always encouraged prospective teachers to give "positive feedback" about

the lessons first; then she asked them to think about their experiences as "students" during the lessons and to share their "suggestions" for improving the lessons from the students' points of view. Because CS/SS prospective teachers switched sides and participated as students when M/S majors retaught their lessons, CS/SS majors noticed that M/S majors received "out loud feedback." "Carol," a CS/SS major commented that, "Their critiques are more, you know, point, point, point, because that's what they're getting. They're getting really good feedback over there. They talk about it usually, or they ask for verbal feedback." She added, "We don't. We started off, and we were never encouraged to do it, so we just stopped...and it helps a lot."

A second crucial aspect of the power/knowledge connection on the side of parental connection involved the way in which prospective teachers learned how to teach content, whether math or science. Prospective teachers noticed that the personalized feedback given by Marianne and Sarah was more content-specific and related to teaching the actual content so that students would learn. Kacy identified the emphasis on the M/S side as a more practice-based than research-based kind of knowledge about teaching. She commented, "The M/S side has taken it a step farther in that we've already started adapting. We're not just teaching the model. We're teaching the student too." She contrasted her side of the laboratory with the CS/SS side, noting that, "On our side you don't just get through your lesson." "You don't just do everything you originally had on your lesson plan," she explained, "but you have to have a sense of success at the end of it, um, in that somebody learned something or, if it had been seventh graders, somebody would have learned something."

Prospective Teachers as Negotiators–Power/Knowledge Constructions

A pivotal event allowed the distinction of different power/knowledge constructions on the part of the two groups of prospective teachers. After Carol, a CS/SS major, retaught her social studies discussion lesson to the group of M/S majors, prospective teachers' comments about what happened during the lesson enabled sharp contrasts between the power/knowledge constructions on the two sides of detached observation and parental connection to emerge. During her lesson Carol gave the prospective teachers some pictures and asked them to distinguish, first, between clothing worn in American colonial times by European settlers and the native American Indians and, then, to identify aspects of the two styles which influenced today's clothing. Erica, a M/S major who described herself as "white" but who also proudly acknowledged some native American Indian ancestry, asked Carol what the purpose of the lesson was, commenting that "I don't see what the purpose of this is." In a later interview Erica said that she was trying to make the point that she understood how both styles influenced today's clothing and that she found it difficult to separate the two. In other interview sessions, though, Carol and Alyssa both commented on the event from the CS/SS prospective teachers' perspective, revealing that CS/SS majors perceived the comment as a challenge and as an attempt to "catch Carol on the spot." Thus, this event prompted the investigator to review interview transcripts and field notes for explanations of prospective teachers' differential interpretations of questions asked during microteaching lessons.

Two contrasting modes of microteaching activity emerged from analyses of instructors' and prospective teachers' differential interpretations of laboratory experiences. The distinctions between the two modes are crucial since the internalization of knowledge construction occurs, first, on an external plane

through the process of social activity (Leontiev cited in Wertsch & Stone, 1985). In one sense the laboratory experience represented an instance of artificial, simulated teaching in which the prospective teacher's primary objective was to make a good grade by carefully following a scripted "agenda." In the other sense, teaching in the laboratory represented an opportunity to practice "real teaching" in which "somebody actually learned something." When prospective teachers were more concerned about making a good grade, they were more likely to "stick to the agenda" of "getting through your six steps" and to negotiate conditions which prevented their being put "on the spot" by unexpected questions asked by laboratory "students" during microteaching lessons. On the other hand, when prospective teachers were more concerned about "a sense of success in that "somebody actually learned something," they were more likely to modify the scripted "agenda" of their lesson plans and to negotiate conditions of assistance by asking questions as "students" during the lesson taught by a fellow prospective teacher.

"Making the Grade"--"On Stage" with the Six Step "Agenda"

Because prospective teachers taught lessons to their peers in simulated classroom settings, laboratory teaching was necessarily artificial. Erica described the artificiality as "sort of a little set-up situation." Alyssa added, "Here (in the laboratory) you're just on a stage pretending that you're teaching a class, and the people in the class are pretending that they care and they're students." "Jeff," explained how prospective teachers experienced the "set-up." Jeff said that teaching his college peers using a lesson plan designed for middle grades students was like following "two different tracks, one that I have planned for and another that is actually happening." Marianne Dickson, the clinical instructor, called strict adherence to "the track" that prospective teachers "had planned for"

following the "script" or "agenda." Marianne said, "I think there's a real difference when they're trying to act out a script or whether they're trying to really help somebody learn something." Marianne commented that Erica, for example, "was great when she was teaching and wasn't following an agenda." Marianne noted that frequently, especially toward the end of the microteaching lessons, Erica would feel pressure and rush to end a lesson. "Then," Marianne said, "the artificiality takes over, and she's a college student trying to make a grade."

"Making the grade" on the side of detached observation depended upon "getting though your six steps," and CS/SS majors carefully negotiated the grading process to reduce the possibility of any unexpected events interfering with the successful completion of their scripted six step agendas. The pivotal incident, in which Erica's unexpected question during Carol's discussion lesson prompted much discussion among the CS/SS majors, caused CS/SS majors' tacitly formed agreements about sanctioned behavior during microteaching lessons to emerge. CS/SS majors, who taught lessons unaided and with no verbal feedback from instructors and peers either during or immediately after lessons, were particularly anxious about the prospect of unexpected comments or questions from "students" during microteaching lessons. Alyssa explained that unexpected questions would "put you on the spot," "unnerve you," and "throw you off" the planned "track" of the scripted lesson plan--what Marianne called the scripted "agenda." After hearing from her fellow CS/SS majors about what happened during Carol's lesson taught to the M/S side, Alyssa commented that CS/SS majors had learned to expect each other not to "catch you off guard when they're in there gradin' you." In Kent's conversation with Alyssa about Carol's lesson, he revealed that CS/SS majors had formed a tacit agreement not to ask each other questions during microteaching lessons. CS/SS majors discussed the events of Carol's lesson, and Alyssa explained how they felt about Erica's question: "You just assume ... what Kent said. I would

just assume not to say that. I would ask 'em later." Kent added that "What we should be doing in there (the microteaching laboratory) is reducing each other's anxiety" and that his microteaching peers should be "sensitive to the idea that people are trying to help each other out" during the grading process by not "catching you on the spot."

"Real Teaching"--"Letting the Students Be Your Guide"

"Real teaching" was a phrase used only by Marianne Dickson, the clinical instructor, to describe particular episodes of teaching in the laboratory. As Marianne defined it, "real teaching" happened in the laboratory when prospective teachers dropped strict adherence to their explicitly scripted lesson plans, went with "the flow," and "followed the students' lead." Marianne believed that "you have to have your script so you can be prepared to be free enough to go where you need to go, but if you only do your script, then something's missing." She explained that in order for prospective teachers to follow Jeff's second "track" or the one that was actually happening, "Sometimes you have to let the students be your guide. You have to follow their lead." Marianne thought about the moments during the laboratory lessons when "real teaching" occurred and commented: "We sort of fade in and out. It depends on the content area. I think it's closer to a real simulation when we're teaching the people that aren't in our content area." She added, "When they were teaching their non-subject-area people--the simulation students, they really didn't know. I mean, they were learning something, and that's when it's like suspended there for a minute, and you forget where you are."

Marianne analyzed the M/S majors' laboratory lessons and pinpointed instances when she thought "real teaching" occurred. Marianne felt that Erica, for example, excelled at "real teaching" when she "pulled it out of students in the

lab with good questions" and "was relaxed enough to listen to the students and see what they really don't understand." During Kacy's reteach of her manipulatives lesson, Marianne said that a lot of the "real teaching" came "when she was trying to figure out on her feet 'How can I make sure these people really know what I'm talking about?' " Marianne said that Kacy "just made up the questions as she went along to make sure." Marianne commented that, when Kacy was "in tune with the students she was working with," her laboratory teaching "turned into more of a real situation there for a minute, and then we had to come back and do our little script."

"Real teaching" likely occurred on both sides of the microteaching laboratory. Indeed, Erica's question during Carol's controversially received discussion lesson probably represented the view of a "student" who was temporarily suspended from the artificiality of the microteaching environment and actively engaged in the lesson. More importantly, though, no one recognized the "realness" of the moment in those terms because CS/SS power and knowledge connected to an artificial path along the six step agenda, whereas M/S power and knowledge connected to a track of shared leadership whose direction emerged through students' responses.

Following their students' lead was a philosophy that M/S instructors practiced as well. M/S instructors' practice of parental connection in the microteaching laboratory modeled Marianne's self-diagnosed mode of "real teaching." Marianne recognized the M/S majors' efforts to arrange conditions of support in their microteaching environment, and both she and Sarah responded by renegotiating in kind their contributions to the teaching-learning relationship. At the beginning of the course as M/S majors taught their first microteaching lessons, they negotiated conditions of support by devising a way to add an element of predictability to the lessons. Before starting to teach their lessons, M/S majors would set up "plants" and "plugs," persons who were specifically designated to

answer certain questions during the lessons so that the lessons would go as planned. When Marianne told the M/S majors that she did not want them to set up answers in the form of "plants" or to give "pre-game speeches" about the content students should already know, she and the M/S majors renegotiated a legitimate way to reduce uncertainty about the introductory content students should already have known. M/S majors began to give the microteaching students "cheat sheets," or lists of definitions of terms that they would have learned in previous lessons.

By the end of the microteaching course M/S majors had successfully renegotiated their "metazone" of proximal development in the microteaching laboratory by evolving a more complex system of shared group support. M/S majors had tacitly agreed to "help each other out" by asking questions during initial teaching lessons. Like the CS/SS majors, M/S majors also wanted to avoid "rattling each other on purpose" and to "make each others' lessons go as smoothly as possible." However, rather than negotiating conditions of support by tacitly agreeing not to ask any unexpected questions during the microteaching lessons, the M/S majors negotiated mutual assistance by tacitly agreeing actually to ask key questions during the microteaching lessons. Although this agreement was formed through tacit negotiations, both Kacy and Marianne realized its existence. Kacy explained how M/S majors as "students" might help out a fellow prospective teacher: "We can tell what they're looking for, so rather than just making it look like a complete plant or something or making it look like we know, we ask a question of them that will make them tell us something."

Negotiating Independence from Dependence--Able to Help Each Other

Vygotsky's (1978) concept of the ZPD encapsulates the notion that persons move from a position of dependence to independence in the process of learning new

tasks. In both modes of microteaching activity, laboratory participants were able to negotiate conditions of task performance so that prospective teachers actually became more independent through carefully arranged conditions of mutual dependence. On the side of detached observation and autonomous school learning, prospective teachers tacitly negotiated conditions to support making a grade by giving a successfully staged performance of an explicitly scripted six step agenda. On the side of "family" and connected labor, prospective teachers and instructors mutually negotiated conditions to support moments of "real teaching" valued for their productivity in the form of students' actual learning. Thus, the same goal of eventual greater independence was achieved in two different ways on the two different modes of microteaching activity.

A crucial difference, though, involved the particular power/knowledge connection of using "out loud feedback" to "teach the student too" on the side of connected labor. An important corollary of the negotiated support on the side of parental connection was the transfer of responsibility for lesson revision through shared, public critiques. M/S instructors felt from the beginning of the laboratory course that prospective teachers should share feedback in oral critiques after each microteaching lesson. After two teach-reteach cycles, though, both Sarah and Marianne realized that M/S prospective teachers were too dependent on their M/S instructors for lesson critique and revision. Sarah had the "brainstorm to stop the post-conference" after the third initial teaching of the lessons and to force the M/S majors to depend on the public feedback sessions for in order to revise their lessons for reteaching. Erica agreed that the M/S majors needed "to be able to learn how to fix things" without the M/S instructors "holdin' our hands." Erica explained how the microteaching course had affected her growth as a prospective teacher: "In the beginning," she said, "I was worried about my grade and how well I did and how I looked to everybody. In the first lesson I was more concerned with the mechanics.

Now I am a lot more concerned with what I am actually teaching." Erica commented that the public critiques were good because they had helped her learn "how to take criticism."

M/S instructors were able to preserve a visible record of the prospective teachers' growth. M/S instructors eliminated the last post-conference and video-taped the oral feedback sessions after the third initial microteaching lessons so that M/S majors would have access to the feedback on tape. Sarah Featherstone watched the video-tapes of the initial discovery teaching sessions in the third teach-reteach cycle and commented that she was "flabbergasted." Sarah noted, "They are at a point where they are able to help each other, and this is a big part of teaching. They gave good suggestions to each other." Sarah explained how the M/S majors' suggestions impressed her:

> I wish I had taped the comments all along. They're criticizing technical things now. They're down to the nitty gritty. They feel comfortable with each other. The criticism is constructive, not negative. They give good ideas on how to resequence, rephrase, avoid giving away the discovery. They learn why to ask questions, how to change a chart, to make more examples. These are things we told them to do ourselves. Now they have learned how to pick it out in others. They could not have done this at first. They didn't know how to reflect. They didn't know what they were looking for. When I first began to look at these last videos, I began scripting, writing my comments in the margin (of the scripts). Then I stopped. They were saying almost what I would have said. They hit a lot of things. That alone to me is worth the whole microteaching.

Future Directions--Implications for Research and Practice

The grounded theoretical framework developed through analyses of the conclusions of this case study holds several important implications for further research as well as for the use of "cognitive apprenticeships" in teacher education (Zeichner, 1990). First, it is important to recognize that an essential element of

"cognitive apprenticeships" in teacher education, such as those in microteaching laboratories, involves the ways in which cultural knowledge about teaching helps to structure the sociocultural processes of learning to teach. In this case study, for example, a specific "cultural model" of teaching, the six step lesson planning format, served as a powerful mediator of prospective teachers' construction of knowledge about teaching (Holland & Quinn, 1987). Moreover, instructors' actions revealed differing implicit philosophies of practice guided by two distinct sources of cultural knowledge about teaching, i.e., the applied science of the effective teaching research base and the practical wisdom gained from the epistemology of reflective practice. Teacher educators need additional research about how various cultural models of teaching mediate cognition in the teaching processes of both prospective teachers and teachers in service. Differences in sources of cultural knowledge about teaching also hold implications for collaborative arrangements in teacher preparation in which college and university professors work in partnership with practicing teachers (see, for example, Goodlad, 1990 and Levine, 1992). This case study shows that partnership participants may have fundamentally different views of the activities which might be required of prospective teachers. Successful collaboration will require discussion of different assumptions that partners hold regarding teacher preparation programs.

Second, the neo-Vygotskian perspective described in this paper redirects the focus of analysis in teaching-learning relationships to Foucauldian power/knowledge connections as they help to constitute power/knowledge relationships that participants construct. For too long much research in teacher education has focused upon the behaviorally based conception that knowledge constitutes isolated skills and competencies whose acquisition can be studied independently of their attendant social settings, cultural conditions, and historical paths. The behavioral view constitutes one "mythology of microteaching." This

case study introduces the notion that there can be myriad "mythologies of microteaching," each dependent upon localized conditions of culturally, socially, and historically linked power/knowledge relations.

This paper has attempted to broaden Vygotsky's notion of the zone of proximal development by conceptualizing the ZPD as a special kind of strategic relationship. Vygotsky (1978) noted the unique relationship that exists between the teacher and the learner when he wrote about his concept of obuchenie, a socioculturally structured process in which teaching and learning form interdependent aspects of a systemic whole (Valsiner, 1988). It is probable that individual differences--such as gender, ethnicity, sexual orientation, and variations in life experiences--likely affect the processes of obuchenie in significant ways. Additional research is necessary to show how the strategic processes involved in co-constructing the zone are "situated between powerful systems of meaning" and socioculturally co-constructed "at the boundaries of civilizations, cultures, races, and genders" (Clifford, 1986, p.2).

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